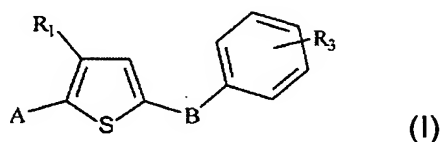


This listing of claims will replace all prior versions, and listings, of claims in the application:

1.(Currently Amended) Process for preparing 2,5-disubstituted 3-alkylthiophenes of formula



in which

A represents a CH_3 , R_2CH_2 , HOCH_2 or $\text{R}_2\text{CH}(\text{OH})$ - group,

B represents a CHOH or CH_2 group,

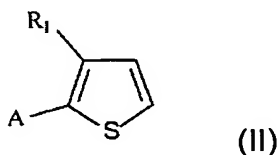
R_1 represents H or a C_1 - C_5 alkyl group,

R_2 represents a C_1 - C_5 alkyl group,

R_3 represents H or a C_1 - C_5 alkyl group or a C_1 - C_5 haloalkyl group, or a halogen chosen from fluorine, chlorine and bromine,

which comprises:

(a) [[the]] reaction of a compound of formula

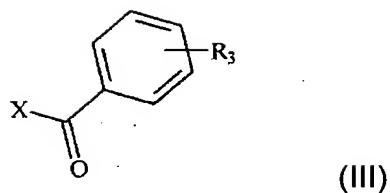


in which

A represents a CHO , CH_3 , R_2CH_2 or $\text{R}_2\text{-CO-}$ group, and

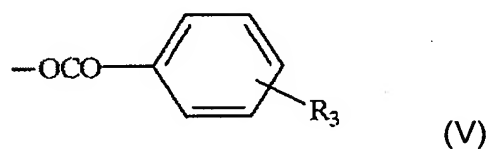
R_1 and R_2 have the meanings given above;

with a compound of formula



in which

X represents OH, halogen or a group of formula



or a group of formula

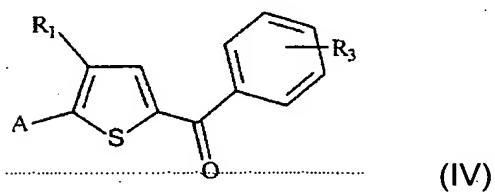


in which

R₄ represents a C₁-C₅ alkyl, an optionally substituted benzyl or an optionally substituted aryl, and

R₃ has the meanings given above;

to give a compound of formula

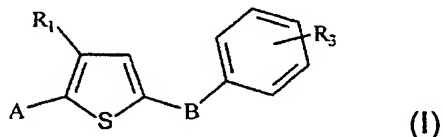


in which

A, R₁, R₂ and R₃ have the meanings given above; and

- (b) [[the]] reduction of the compound of formula IV thus obtained to give the compound of formula I.

2.(Currently Amended) The process of ~~Process according to~~ Claim 1 for the
preparation of 2,5-disubstituted 3-alkylthio-phenes of formula

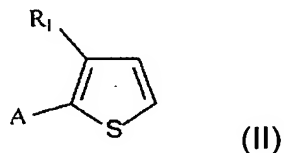


in which

A represents a CH_3 or R_2CH_2 group,

which comprises:

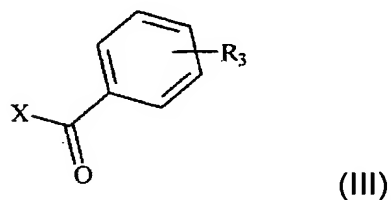
(a) [[the]] reaction of a compound of formula



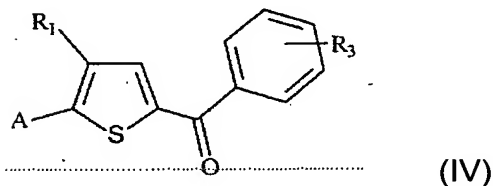
in which

A represents a CH_3 or R_2CH_2 group,

with a compound of formula



to give a compound of formula

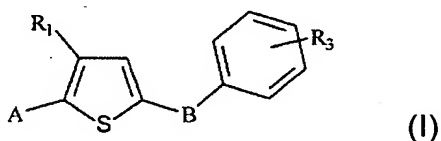


in which

A represents a CH_3 or R_2CH_2 group, and

- (b) ~~[[the]]~~ reduction of the compound of formula IV thus obtained to give the compound of formula I.

3.(Currently Amended) The process of ~~Process according to~~ Claim 1 for the preparation of 2,5-disubstituted 3-alkylthiophenes of formula

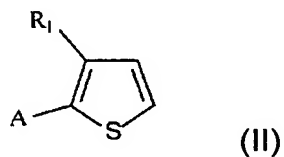


in which

A represents a CH_3 , R_2CH_2 , HOCH_2 or $\text{R}_2\text{CH}(\text{OH})$ - group,

which comprises:

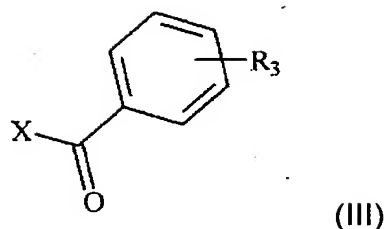
- (a) ~~[[the]]~~ reaction of a compound of formula



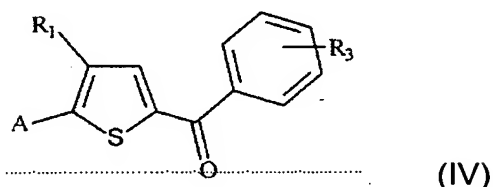
in which

A represents a CHO or $\text{R}_2\text{-CO-}$ group,

with a compound of formula



to give a compound of formula



in which

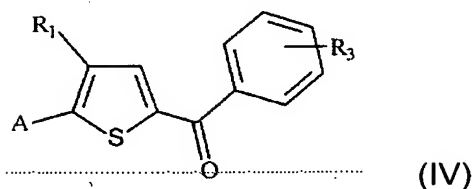
A represents a CHO or R₂-CO group, and

- (b) [[the]] reduction of the compound of formula IV thus obtained to give the compound of formula I.

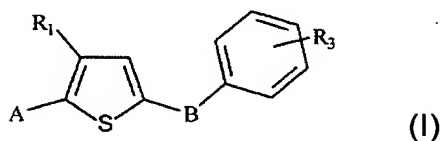
4.(Currently Amended) The process of ~~Process according to~~ Claim 1 in which the reaction mentioned in point (a) is performed with a compound of formula III, in which X represents halogen, in the presence of a Lewis acid and in a solvent chosen from chlorinated solvents and deactivated aromatic solvents, ~~preferably with benzoyl chloride,~~ in the presence of AlCl₃ and in methylene chloride, in which the molar ratio of compound III/Lewis acid/compound II is between 0.9-1.5/0.9-1.5/1 ~~and preferably about 1/1/1.~~

5.(Original) Process according to Claim 1, in which the reduction mentioned in point (b) is performed by means of a single reductive treatment of the

compound of formula



to give the compound of formula



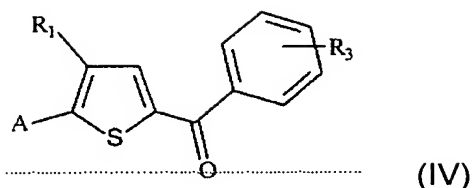
in which

A represents a CH_3 or R_2CH_2 group, and

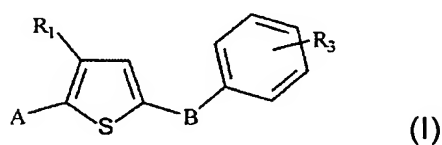
B represents a CH_2 group.

6.(Original) Process according to Claim 5, in which the said reductive treatment is performed with sodium borohydride or sodium cyanoborohydride in the presence of trifluoro-acetic acid.

7.(Original) Process according to Claim 1, in which the reduction mentioned in point (b) is performed by means of a first reduction reaction (b_1) of the compound of formula



to give the hydroxylated intermediate compound of formula

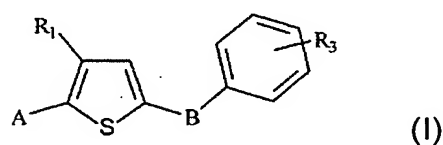


in which

A represents a CH_3 , R_2CH_2 , HOCH_2 or $\text{R}_2\text{CH}(\text{OH})$ - group, and

B represents a CHOH group;

optionally followed by a second reduction reaction (b_2) of the said hydroxylated intermediate of formula I to give a final compound of formula



in which

A represents a CH_3 or R_2CH_2 group, and

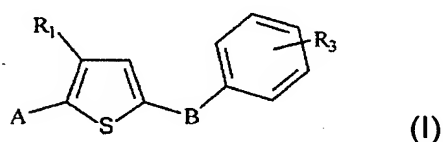
B represents a CH_2 group.

- 8.(Original) Process according to Claim 7, in which the reduction mentioned in point (b) is performed by means of the said reduction reactions (b_1) and (b_2) successively.

- 9.(Currently Amended) ~~Process~~ The process according to Claim 7, in which the first of the said reduction reactions (b_1) is performed by treatment with metal hydrides[[, such as]] selected from the group consisting of sodium borohydride, lithium aluminium hydride, [[or]] boranes, and mixtures thereof, or by treatment with aluminium isopro-poxide, ~~preferably by treatment with sodium borohydride.~~
- 10.(Currently Amended) The process of [[Process according to]] Claim 7, in which the second of the said reduction reactions (b_2) is performed by treatment with a borohydride in the presence of a strong acid[[, such as]] selected from the group consisting of trifluoroacetic acid, methanesulphonic acid, [[or]] sulphuric acid, and mixtures thereof, or with zinc iodide or by catalytic hydrogenation[[,]] ~~preferably by treatment with sodium borohydride and trifluoroacetic acid.~~
- 11.(Currently Amended) The process of [[Process according to]] Claim 7, in which the second of the said reduction reactions (b_2) is performed by catalytic hydrogenation of the hydroxylated intermediate of formula I ($B=CHOH$) dissolved in a suitable solvent, ~~such as an alcohol, for instance methanol, ethanol or isopropanol, preferably methanol, or in a mixture of water and alcohols;~~ at a hydrogen pressure of between 1 and 10 bar, at a temperature of between 15 and 60°C, in the presence of a hydrogenation catalyst chosen from palladium and platinum, ~~preferably palladium supported on an inert support~~

~~such as carbon, alumina, silica or zeolites, preferably on carbon,~~ in a neutral or acidic medium.

12.(Original) Process according to Claim 7, in which the said hydroxylated intermediate compound of formula



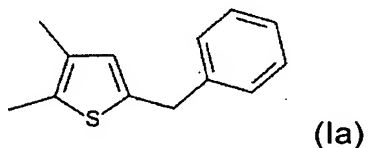
in which

A represents a CH_3 , R_2CH_2 , $HOCH_2$ or $R_2CH(OH)$ - group, and

B represents a $CHOH$ group

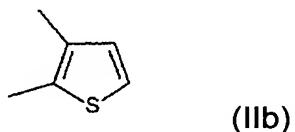
is purified by crystallization.

13.(Original) Process for preparing 2,3-dimethyl-5-benzylthiophene of formula

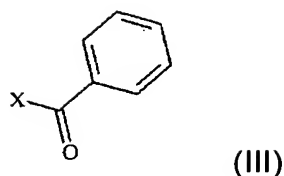


which comprises:

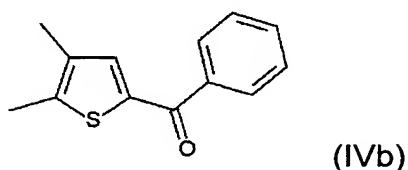
(a) the reaction of the compound of formula



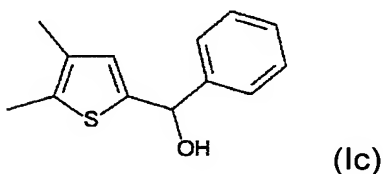
with a compound of formula



in which X represents halogen;
 to give the compound of formula



(b₁) the reduction of compound IVb to give the hydroxylated intermediate
 compound of formula



and

(b₂) the reduction of the hydroxylated intermediate compound Ic to give 2,3-
 dimethyl-5-benzylthiophene (Ia).

14.(Currently Amended) The process of Process according to Claim 13, in which
the reaction (a) is performed in the presence of a Lewis acid and a molar ratio
of compound III/Lewis acid/compound II ranges from 0.9-1.5/0.9-1.5/1,
the reduction reaction (b₁) is preformed by treatment wit a metal hydride, and
the reduction reaction (b₂) is performed by treatment with a borohydride in the
presence of a strong acid selected from the group consisting of trifluoroacetic

acid, methanesulfonic acid, or sulfuric acid, or in the presence of zinc iodide
or by catalytic hydrogenation

~~the reactions mentioned in points (a), (b₁) and (b₂) are performed under the~~
~~experimental conditions of Claims 4, 9 and 10, respectively.~~

15.(Currently Amended) The process of ~~Process according to~~ Claim 13, in which
the hydroxylated intermediate compound of formula Ic is purified by
crystallization, ~~preferably from n-heptane.~~

16.(New) The process of claim 4, wherein the solvent is benzoyl chloride.

17.(New) The process of claim 4, wherein the molar ratio of compound III/Lewis
acid/compound II is 1/1/1.

18.(New) The process of claim 7, wherein the second reduction reaction (b₂) is
performed by treatment with sodium borohydride.

19.(New) The process of claim 7, wherein the second reduction reaction (b₂) is
performed by treatment with sodium borohydride and trifluoroacetic acid.

20.(New) The process of claim 7, wherein the hydrogenation catalyst is
palladium supported on an inert support.

- 21.(New) The process of claim 7, wherein the inert support is selected from the group consisting of carbon, alumina, silica, zeolite, and mixtures thereof.
- 22.(New) The process of claim 7, wherein the inert support is carbon.
- 23.(New) The process of claim 13, wherein the hydroxylated intermediate compound of formula 1c is purified by crystallization from n-heptane.
- 24.(New) The process of claim 11, wherein the suitable solvent is an alcohol or a mixture of water and the alcohol.
- 25.(New) The process of claim 11, wherein the alcohol is selected from the group consisting of methanol, ethanol, isopropanol, and mixtures thereof.
- 26.(New) The process of claim 11, wherein the alcohol is methanol.
- 26.(New) The process of claim 11, wherein the hydrogenation catalyst is palladium.